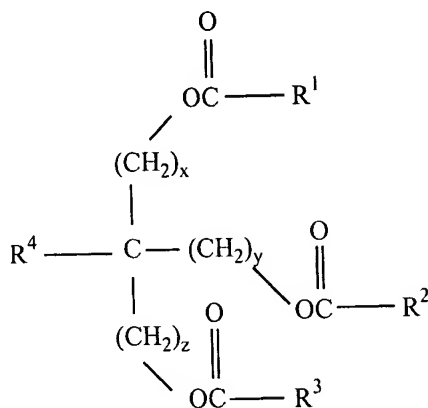


WHAT IS CLAIMED IS:

1. A low phosphorous or phosphorous-free lubricating oil composition comprising (a) a major amount of base oil of lubricating viscosity and (b) a minor deposit-inhibiting effective amount of at least one polyol ester of the general formula



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wherein R^1 , R^2 and R^3 are independently an aliphatic hydrocarbyl moiety have from 4 to 24 carbon atoms, R^4 is hydrogen or an aliphatic hydrocarbyl moiety having 1 to 10 carbon atoms and x, y and z are the same or different and are integers from 1 to 6; wherein the composition has a phosphorous content not exceeding 0.08 by weight, based on the total weight of the composition.

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2. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, wherein the base oil of lubricating viscosity is comprised of a mineral base oil.

3. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, wherein the base oil of lubricating viscosity is comprised of a polyalphaolefin base oil.

5 4. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, wherein R^1 , R^2 and R^3 of the polyol ester are independently selected from a saturated or unsaturated aliphatic hydrocarbyl moiety having from 6 to 10 carbon atoms.

10 5. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, wherein R^1 , R^2 and R^3 are independently selected from a saturated or unsaturated aliphatic moiety having from 6 to 10 carbon atoms, R^4 is an aliphatic hydrocarbyl moiety having 1 to 6 carbon atoms and x, y and z are 1.

15 6. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, wherein the minor deposit-inhibiting effective amount of the polyol ester is about 0.5 wt. % to about 10 wt. %, based on the total weight of the composition.

20 7. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, wherein the minor deposit-inhibiting effective amount of the polyol ester is about 1 wt. % to about 5 wt. %, based on the total weight of the composition.

8. The low phosphorous or phosphorous-free lubricating oil composition of Claim 5, wherein the minor deposit-inhibiting effective amount of the polyol ester is about 0.5 wt. % to about 10 wt. %, based on the total weight of the composition.

5 9. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, wherein the composition has an SAE Viscosity Grade of 0W, 0W-20, 0W-30, 0W-40, 0W-50, 0W-60, 5W, 5W-20, 5W-30, 5W-40, 5W-50, 5W-60, 10W, 10W-20, 10W-30, 10W-40, 10-50, 15W, 15W-20, 15W-30 or 15W-40.

10 10. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, further comprising at least one additive selected from the group consisting of metallic detergents, ashless dispersants, friction modifiers, extreme pressure agents, viscosity index improvers and pour point depressants.

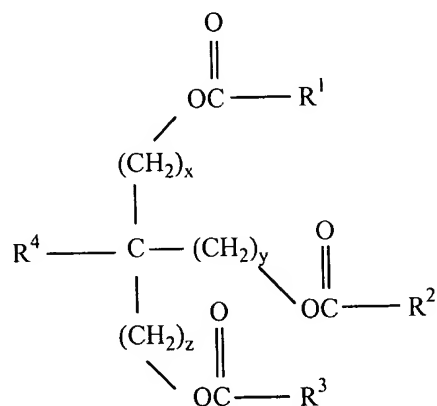
15 11. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, having a phosphorous content not exceeding 0.05 wt. %, based on the total weight of the composition.

20 12. The low phosphorous or phosphorous-free lubricating oil composition of Claim 5, having a phosphorous content not exceeding 0.05 wt. %, based on the total weight of the composition.

13. The low phosphorous or phosphorous-free lubricating oil composition of Claim 1, having a sulfur content not exceeding 0.2 wt. %, based on the total weight of the composition.

5 14. The low phosphorous or phosphorous-free lubricating oil composition of Claim 12, having a sulfur content not exceeding 0.2 wt. %, based on the total weight of the composition.

15 15. A method of operating an internal combustion engine comprising the step of operating the internal combustion engine with a low-phosphorous or phosphorous-free lubricating oil composition comprising (a) a major amount of a base oil of lubricating viscosity and (b) a minor deposit-inhibiting effective amount of at least one polyol ester of the general formula



15 wherein R^1 , R^2 and R^3 are independently an aliphatic hydrocarbyl moiety have from 4 to 24 carbon atoms, R^4 is hydrogen or an aliphatic hydrocarbyl moiety having 1 to 10

carbon atoms and x, y and z are the same or different and are integers from 1 to 6;
wherein the composition has a phosphorous content not exceeding 0.08 by weight, based
on the total weight of the composition.

5 16. The method of Claim 15, wherein the base oil of lubricating viscosity is
comprised of a mineral base oil.

17. The method of Claim 15, wherein the base oil of lubricating viscosity is
comprised of a polyalphaolefin base oil.

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18. The method of Claim 15, wherein R^1 , R^2 and R^3 of the polyol ester are
independently selected from a saturated or unsaturated aliphatic hydrocarbyl moiety
having from 6 to 10 carbon atoms.

15 19. The method of Claim 15, wherein R^1 , R^2 and R^3 are independently selected
from a saturated or unsaturated aliphatic moiety having from 6 to 10 carbon atoms, R^4 is
an aliphatic hydrocarbyl moiety having 1 to 6 carbon atoms and x, y and z are 1.

20 20. The method of Claim 15, wherein the minor deposit-inhibiting effective
amount of the polyol ester is about 0.5 wt. % to about 10 wt. %, based on the total weight
of the composition.

21. The method of Claim 15, wherein the minor deposit-inhibiting effective amount of the polyol ester is about 1 wt. % to about 5 wt. %, based on the total weight of the composition.

5 22. The method of Claim 19, wherein the minor deposit-inhibiting effective amount of the polyol ester is about 0.5 wt. % to about 10 wt. %, based on the total weight of the composition.

23. The method of Claim 15, wherein the composition has an SAE Viscosity
10 Grade of 0W, 0W-20, 0W-30, 0W-40, 0W-50, 0W-60, 5W, 5W-20, 5W-30, 5W-40, 5W-50, 5W-60, 10W, 10W-20, 10W-30, 10W-40, 10W-50, 15W, 15W-20, 15W-30 or 15W-40.

24. The method of Claim 15, further comprising at least one additive selected
15 from the group consisting of metallic detergents, ashless dispersants, friction modifiers, extreme pressure agents, viscosity index improvers and pour point depressants.

25. The method of Claim 15, wherein the composition has a phosphorous content not exceeding 0.05 wt. %, based on the total weight of the composition.

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26. The method of Claim 19, wherein the composition has a phosphorous content not exceeding 0.05 wt. %, based on the total weight of the composition.

27. The method of Claim 15, wherein the composition has a sulfur content not
5 exceeding 0.2 wt. %, based on the total weight of the composition.

28. The method of Claim 26, wherein the composition has a sulfur content not exceeding 0.2 wt. %, based on the total weight of the composition.